IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:
Michael J. Wookey, Trevor Watson, Jean Chouanard

Serial No.: 10/067,165

Filed: February 4, 2002

For: **REMOTE SERVICES SYSTEM BACK-CHANNEL MULTICASTING**

Confirmation No. 4921

Art Unit: 2152

Examiner: Kenny Lin

Customer No. 32658

Docket No. P7231

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
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APPELLANT'S BRIEF UNDER 37 CFR 41.37 - AMENDED

I. Real Party in Interest

Sun Microsystems, Inc.
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II. Related Appeals and Interferences

No other appeals or interferences are currently known to Appellants that will directly affect, be directly affected by, or have a bearing on the decision to be rendered by the Board of Patent Appeals and Interferences in the present appeal.

III. Status of Claims

Claims 1-18 are pending in the application. No claims have been allowed.

Claims 7-12 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

Claims 1-2, 5-8, 11-14, and 17-18 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,349,340 by Dyer et al. ("Dyer").

Claims 3-4, 9-10 and 15-16 were rejected under 35 U.S.C. § 103(a) based upon Dyer and further in view of U.S. Patent Application Publication No. 2002/0065929 by Kamentsky et al ("Kamentsky").

The rejections of Claims 1, 7, and 13 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,349,340 by Dyer are the only rejections at issue in this Appeal.

IV. Status of Amendments

All the claim amendments have been entered. No amendments have been filed in response to the Final Office Action mailed on September 22, 2005.

The Appellant acknowledges a typographical error in claim 7 fostering a rejection of claims 7-12 under 35 U.S.C. § 112. While not an issue for the purposes of this appeal, Appellant acknowledges the mistake and upon resolution of this appeal will propose an amendment to rectify this deficiency.

V. Summary of Claimed Subject Matter

Claims 1, 7, and 13, as being rejected under 35 U.S.C. § 102(e) by being anticipated by U.S. Patent No. 6,349,340 by Dyer et al. ("Dyer"), are at issue in this Appeal. The following concise explanation of the subject matter defined in each of the independent claims 1, 7, and 13 involved in this Appeal refer to the specification by page and line numbers and to the drawing by reference characters. It is noted that dependant claims are not being argued separately.

Claim 1 states:

1. A method of communicating in a remote services system comprising:

communicating a forward channel communication using a forward channel communication path;

communicating a back-channel communication using a back-channel communication path, the back-channel communication path being established only after a forward channel communication path is established; and,

using the back-channel communication path to multicast a message to a group of remote service components.

The method of communicating in a remote services system of claim 1 is clearly shown in Figure 11 and Figures 20-23B and is described in the paragraph beginning on page 19, line 17 and paragraphs beginning on page 37, line 20 through page 39, line 28. Figure 11 shows on the right most portion of the figure communicating using a forward channel communication path and a back-channel communication using a back-channel communication path. As shown in Figure 11, communication is established and connections are made from the bottom tier (the remote proxy tier) to the top tier.

The communication paths referred to in claim 1 can be seen on the right most portion of Figure 11 in a vertical orientation. These same communication paths are in a

horizontal orientation in Figures 20-23B indicating a forward communication path (left to right) from the remote service components 210 toward application MLM 218. The back-channel communication path is also shown in a horizontal orientation in at least Figures 22 and 23 (moving from right to left) between application MLM 218 and intermediate MLMs 216 and intermediate MLMs 216 and remote service components 210.

The back-channel communication path being established only after a forward channel communication path is established is described in the paragraph beginning on page 19, line 17 wherein the specification clearly states that communication is established and connections are made from the bottom tier (the remote services proxy tier) to the top tier, i.e. the forward communication path. Since the forward communication path is established first, it follows that the back-channel communication path is established afterward. This is also supported in Figure 22, block 2216 which describes the creation of a transfer request via a back-channel

Using the back-channel communication path to multicast a message to a group of remote service components 210 is discussed in the paragraph beginning on page 38, line 13. Referring to Figure 22, bulk data transfer, a multicast, is generally started by the applications MLM 218. The remote services system 100 proceeds by fetching the data to be multicast to the nearest intermediate MLM 216 which is then responsible for redistributing the data to the final destinations (i.e. the intermediate MLM 216 performs the multicast to the remote service components 210). More specifically, the applications MLM 218 allocates a URL to store and publish the bulk data to be transferred 2210 at step 2212 using a web server 2214. The applications MLM 218 then creates a transfer request and sends the request via the back-channel at step 2216.

The intermediate MLM 216 can then determine whether to accept the transfer. If accepted, the intermediate MLM 216 fetches the file and publishes the file at step 2240. Figures 23A and 23B show the fetch operation, which multicasts the message to the remote service components in step 2340, in more detail.

Claim 7 states:

7. A method of communicating in a remote services system comprising:

assigning a plurality of remote service components within the remote services system with a respective plurality of unique remote services identifiers;

communicating a forward channel communication using a forward channel communication path;

communicating a back-channel communication using a back-channel communication path; and,

using the back-channel communication path to multicast a message to a group of remote services components based upon unique remote services identifiers corresponding to components of the group of remote service components.

The method of communicating in a remote services system of claim 7 is also shown in Figure 11 and Figures 20-23B and is described in the paragraph beginning on page 19, line 17 and paragraphs beginning on page 37, line 20 through page 39, line 28. Figure 11 shows a plurality of remote service components 1110 (item 210 in Figure 20). As described on page 4, lines 4-10, a plurality of unique remote service identifiers are assigned to the plurality of remote service components, respectively. The allocation of these identifiers is managed by a remote services proxy as discussed on page 8, lines 17-21 and on page 10, lines 17-23. Figure 11 shows on the right most portion of the figure communicating using a forward channel communication path and communicating using a back-channel communication path. As shown in Figure 11, communication is established and connections are made from the bottom tier (the remote proxy tier) to the top tier.

The communication paths referred to in claim 7 can be seen on the right most portion of Figure 11 in a vertical orientation. These same communication paths are in a horizontal orientation in Figures 20-23B indicating a forward communication path (left to right) from the remote service components 210 toward application MLM 218. The back-

channel communication path is also shown in a horizontal orientation in at least Figures 22 and 23 (moving from right to left) between application MLM 218 and intermediate MLMs 216 and intermediate MLMs 216 and remote service components 210.

Using the back-channel communication path to multicast a message to a group of remote service components 210 is discussed in the paragraph beginning on page 38, line 13. Referring to Figure 22, bulk data transfer, a multicast, is generally started by the applications MLM 218. The remote services system 100 proceeds by fetching the data to be multicast to the nearest intermediate MLM 216 which is then responsible for redistributing the data to the final destinations (i.e. the intermediate MLM 216 performs the multicast to the remote service components 210). More specifically, the applications MLM 218 allocates a URL to store and publish the bulk data to be transferred 2210 at step 2212 using a web server 2214. The applications MLM 218 then creates a transfer request and sends the request via the back-channel at step 2216.

The intermediate MLM 216 can then determine whether to accept the transfer. If accepted, the intermediate MLM 216 fetches the file and publishes the file at step 2240. Figures 23A and 23B show the fetch operation, which multicasts the message to the remote service components in step 2340, in more detail. The use of remote services identifiers corresponding to components of the group of remote service components for the purposes of back-channel communications is discussed on page 30, lines 9-14.

Claim 13 states:

13. A remote services system comprising:

a plurality of remote service components, the plurality of remote service components including a respective plurality of unique remote services identifiers;

a forward channel communication path coupled to the plurality of remote service components;

a back-channel communications path coupled to the plurality of remote service

components, the back-channel communications path allowing multicast of a message to a group of components based upon unique remote services identifiers corresponding to components of the group of remote service components.

A remote services system of claim 13 is also shown in Figure 11 and Figures 20-23B and is described generally in the paragraph beginning on page 19, line 17 and paragraphs beginning on page 37, line 20 through page 39, line 28. Figure 11 shows a plurality of remote service components 1110 (item 210 in Figure 20) coupled to both a forward channel communication path and a back-channel communication path. As described on page 4, lines 4-10, a plurality of unique remote service identifiers are assigned to the plurality of remote service components, respectively. The allocation of these identifiers is managed by a remote services proxy as discussed on page 8, lines 17-21 and on page 10, lines 17-23. Figure 11 shows on the right most portion of the figure forward channel communication using a forward channel communication path and back-channel communication using a back-channel communication path. As shown in Figure 11, communication is established and connections are made from the bottom tier (the remote proxy tier) to the top tier.

The communication paths referred to in claim 13 can, again, be seen on the right most portion of Figure 11 in a vertical orientation. These same communication paths are in a horizontal orientation in Figures 20-23B indicating a forward communication path (left to right) from the remote service components 210 toward application MLM 218. The back-channel communication path is also shown in a horizontal orientation in at least Figures 22 and 23 (moving from right to left) between application MLM 218 and intermediate MLMs 216 and intermediate MLMs 216 and remote service components 210.

Using the back-channel communication path to multicast a message to a group of remote service components 210 is discussed in the paragraph beginning on page 38, line

13. Referring to Figure 22, bulk data transfer, a multicast, is generally started by the applications MLM 218. The remote services system 100 proceeds by fetching the data to be multicast to the nearest intermediate MLM 216 which is then responsible for redistributing the data to the final destinations (i.e. the intermediate MLM 216 performs the multicast to the remote service components 210). More specifically, the applications MLM 218 allocates a URL to store and publish the bulk data to be transferred 2210 at step 2212 using a web server 2214. The applications MLM 218 then creates a transfer request and sends the request via the back-channel at step 2216.

The intermediate MLM 216 can then determine whether to accept the transfer. If accepted, the intermediate MLM 216 fetches the file and publishes the file at step 2240. Figures 23A and 23B show the fetch operation, which multicasts the message to the remote service components in step 2340, in more detail. The use of remote services identifiers corresponding to components of the group of remote service components for the purposes of back-channel communications is further discussed on page 30, lines 9-14.

VI. Grounds of Rejection to be Reviewed on Appeal

The rejections of claims 1, 7 and 13 under 35 U.S.C. § 102(e) as being anticipated by Dyer are the only rejections to be reviewed on this appeal.

VII. Argument

Rejection of claims 1, 7 and 13 based upon Dyer under 35 U.S.C. § 102(e) is improper since Dyer fails to disclose using the back-channel communication path to multicast a message to a group of remote service components.

The Examiner's rejections of claims 1 and 7 of the Appellants' invention is improper since Dyer fails to disclose the establishment of a back-channel communication path only after a forward channel communication path is established.

Claim 1 states:

1. A method of communicating in a remote services system comprising:

communicating a forward channel communication using a forward channel communication path;

communicating a back-channel communication using a back-channel communication path, the back-channel communication path being established only after a forward channel communication path is established; and,

using the back-channel communication path to multicast a message to a group of remote service components.

Claim 7 states:

7. A method of communicating in a remote services system comprising:

assigning a plurality of remote service components within the remote services system with a respective plurality of unique remote services identifiers;

communicating a forward channel communication using a forward channel communication path;

communicating a back-channel communication using a back-channel communication path; and,

using the back-channel communication path to multicast a message to a group of remote services components based upon unique remote services identifiers corresponding to components of the group of remote service components.

The Examiner's logic in constructing a *prima facie* case of anticipation under Dyer is fundamentally flawed. The Examiner correlates citations in Dyer to the first and second elements of the claimed invention, namely the forward channel communication path and the establishment of the back-channel communication path, but then ignores that composition and improperly equates Dyer's distribution of multicast data to the back-

channel communication path. According to the Examiner's construction, Dyer uses the forward channel communication path to distribute multicast data. The Examiner correlates the Appellants' forward channel communication path to the channel upon which the processes or nodes make their request for data and correlates the Appellants' use of the back-channel to the source channel upon which the multicast data is received from the source. Then, in making his rejection, the Examiner attempts to argue that the Appellants' claimed use of the back-channel to multicast data is the same as the subscribed client channels as discussed in Dyer. These channels, however, as is shown below, are the same channels that the Examiner identified as the channels from which the processes make their request for data, namely the forward channel communication path. The rejection is therefore improper.

Dyer appears to teach a method for receiving requested multicast data over a plurality of multicast communication channels. Rather than transmitting a plurality of requested multicast data from a plurality of data sources to each of the requesting nodes, Dyer discloses a method to filter the multicast data and route the filtered data to the requesting processes so as to reduce network overloading. *See* Dyer abstract. Dyer establishes a channel communications path, or a source channel for multicast data as it is referenced in Dyer, after it receives a request for multicast data from a plurality of client nodes. Once the requests are received, a source communications path is established to convey the requested multicast data to a data distribution manager and one or more data distribution libraries. Thereafter, the data is communicated to the requesting nodes or services via the channel used to request the data. As recited in Dyer, "The method can include receiving from a process in a client node a request for multicast data; identifying a source for the requested multicast data; determining a source communications channel for receiving the requested multicast data; enabling the source communication channel; receiving the multicast data through the source communications channel; and, forwarding the multicast data to the requesting client node process." Dyer Col. 2, lines 30-41 (emphasis added). Significantly, the channel used to forward the multicast data appears

to be the same channel upon which the request arrived. *See* Dyer Col. 3, lines 43-45, 49, Col. 6, lines 64-65.

The Appellants' invention as claimed utilizes the back-channel communication path to multicast data to a group of remote service components, not the forward channel as disclosed by Dyer and as construed by the Examiner. Using the Appellants' nomenclature according to the teachings of Dyer and as cited by the Examiner in brackets ([ ]), Dyer teaches "receiving from a process [using a forward channel communication path] a request for multicast data; identifying a source for the requested multicast data; determining a source communications channel [a back-channel communications path ... established only after a forward channel communications path is established] for receiving the requested multicast data; enabling the source communications channel [the back-channel communication path]; receiving the requested multicast data through the source [back-channel communication path] communications channel; and, forwarding the multicast data to the requesting client node process [*via the back-channel communication path*]." Id. Clearly, the Examiner's attempt to equate the forwarding of the multicast data to the Appellants' claimed back-channel communication path is improper.

Unlike Dyer, the Appellants' invention establishes the path by which to distribute the multicast data only after the establishment of the "source" communications channel. Dyer establishes this channel upon receiving the request for multicast data or at some other point of subscription from the plurality of client nodes. To clearly show why Dyer fails to disclose each and every limitation of the Appellants' invention, consider a wording of claim 1 using the nomenclature of Dyer, as cited by the Examiner found in brackets ([ ]).

Claim 1 states:

> Communicating a forward channel communication using a forward channel communication path [*requested by processes distributed on client nodes; receiving from a plurality of processes in a client node requests from multicast data*];

communicating a back-channel communication using a back-channel communication path, the back-channel communication path being established only after a forward channel communication path is established [*determining a source communication channel for receiving the multicast data; enabling the source communications channel*]; and,

using the back-channel communication path to multicast a message to a group of remote service components [*multicast data corresponding to the request by the requesting processes*].

As construed by the Examiner, Dyer uses the forward channel, or the channel through which the request for multicast data is received, to distribute the multicast data. The back-channel, as construed by the Examiner, is then established after receiving the request for multicast data. The Examiner's argument, however, then fails with respect to the communication of the multicast data via the back-channel path as claimed by the Appellants. Using the Examiner's construction, and as clearly shown in Dyer, the distribution of the multicast data would have to occur via the source or front-channel communication path. Yet the Appellants claim that the multicast message is conveyed via the back-channel communication path. The Examiner's claim construction is inconsistent and flawed.

The Examiner fails to show that each and every claimed limitation is present in Dyer. Accordingly the rejection of claim 1 under 35 U.S.C. § 102(e) is improper.

Rejection of claims 7 and 13 based upon Dyer under 35 U.S.C. § 102(e) is improper since Dyer fails to disclose a back-channel communication allowing multicast of a message to a group of components based upon unique remote services identifiers .

Claim 7 states:

7. A method of communicating in a remote services system comprising:

assigning a plurality of remote service components within the remote services system with a respective plurality of unique remote services identifiers;

communicating a forward channel communication using a forward channel communication path;

communicating a back-channel communication using a back-channel communication path; and,

using the back-channel communication path to multicast a message to a group of remote services components based upon unique remote services identifiers corresponding to components of the group of remote service components.

Claim 13 states:

13. A remote services system comprising:

a plurality of remote service components, the plurality of remote service components including a respective plurality of unique remote services identifiers;

a forward channel communication path coupled to the plurality of remote service components;

a back-channel communications path coupled to the plurality of remote service components, the back-channel communications path allowing multicast of a message to a group of components based upon unique remote services identifiers corresponding to components of the group of remote service components.

With respect to claims 7 and 13, the Appellants further define that the back-channel communication of a multicast message is based on unique remote service

identifiers. The Appellants agree that Dyer teaches that an IP address or subscriber ID/information is evidence of a respective unique remote service identifier. However, Dyer, as discussed above, associates these identifiers with the forward channel, not the back-channel as is claimed by the Appellants. Again, the Examiner's claim construction is flawed making his rejection under 35 U.S.C. § 102(e) improper.

As claims 2-6, 8-12 and 14-18 depend from claims 1, 7 and 13 respectively, the rejection of these claims under 35 U.S.C. § 102(e) or 35 U.S.C. § 103(a) is also without foundation. Based on the above remarks, Appellants request that the rejection of claims 1, 7 and 13 be reversed.

Conclusion

In view of all of the above, claims 1-6 and 13-18 are believed to be allowable and the case in condition for allowance. Claims 7-12 are believed to be allowable upon the resolution of an informality due to an inconsistent using of the word "services." Appellants respectfully request that the Examiner's rejections based on 35 U.S.C. § 102 (e) and 35 U.S.C. § 103(a) be reversed for all pending claims.

Respectfully submitted,

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VIII. APPENDIX OF CLAIMS ON APPEAL

1. A method of communicating in a remote services system comprising:

communicating a forward channel communication using a forward channel communication path;

communicating a back-channel communication using a back-channel communication path, the back-channel communication path being established only after a forward channel communication path is established; and

using the back-channel communication path to multicast a message to a group of remote service components.

2. The method of claim 1 wherein the message being multicast is an administrative control message.

3. The method of claim 1 wherein the message being multicast is a bulk transfer request.

4. The method of claim 1 wherein the message being multicast is a bulk data response.

5. The method of claim 1 wherein the remote services system includes an intermediate mid level manager, the intermediate mid level manager performing the multicast.

6. The method of claim 5 wherein the remote services system includes an applications mid level manager, the applications mid level manager sending a request to the intermediate mid level manager to perform the multicast.

7. A method of communicating in a remote services system comprising:

assigning a plurality of remote service components within the remote services system with a respective plurality of unique remote services identifiers;

communicating a forward channel communication using a forward channel communication path;

communicating a back-channel communication using a back-channel communication path; and

using the back-channel communication path to multicast a message to a group of remote service components based upon unique remote services identifiers corresponding to components of the group of remote service components.

8. The method of claim 7 wherein the message being multicast is an administrative control message.

9. The method of claim 7 wherein the message being multicast is a bulk transfer request.

10. The method of claim 7 wherein the message being multicast is a bulk data response.

11. The method of claim 7 wherein the remote services system includes an intermediate mid level manager, the intermediate mid level manager performing the multicast.

12. The method of claim 11 wherein the remote services system includes an applications mid level manager, the applications mid level manager sending a request to the intermediate mid level manager to perform the multicast.

13. A remote services system comprising:

a plurality of remote service components, the plurality of remote service components including a respective plurality of unique remote services identifiers;

a forward channel communication path coupled to the plurality of remote service components;

a back-channel communications path coupled to the plurality of remote service components, the back-channel communications path allowing multicast of a message to a group of components based upon unique remote services

identifiers corresponding to components of the group of remote service components.

14. The system of claim 13 wherein the message being multicast is an administrative control message.

15. The system of claim 13 wherein the message being multicast is a bulk transfer request.

16. The system of claim 13 wherein the message being multicast is a bulk data response.

17. The system of claim 13 wherein the plurality of components includes an intermediate mid level manager, the intermediate mid level manager performing the multicast.

18. The system of claim 17 wherein the plurality of remote service components includes an applications mid level manager, the applications mid level manager sending a request to the intermediate mid level manager to perform the multicast.

IX. EVIDENCE APPENDIX

No copies of evidence are required with this Appeal Brief. Appellants have not relied upon any evidence submitted under 37 C.F.R. §§ 1.130, 1.131, or 1.132.

X. RELATED PROCEEDINGS APPENDIX

There are no copies of decisions rendered by a court or the Board to provide with this Appeal as there are no related proceedings.